

**WHAT IS CLAIMED IS:**

1. (canceled)

2. (canceled)

3. (currently amended) First in first out hydration tank with a stationary outside tank wall, a stationary central inlet tube provided centrally within said outside tank wall, a vessel wall provided between said central inlet tube and said outside tank wall so that liquid flows in a downward direction within said inlet tube and then in an upward direction between said inlet tube and said vessel wall and then again in a downward direction between the vessel wall and the outside tank wall before exiting through an exit provided at the bottom of the outside tank wall wherein the improvement comprises:

means for mixing a liquid in a direction that is normal to a direction of flow of the liquid as the liquid passes between an inlet and an exit of a first in first out hydration tank,

~~A hydration tank according to Claim 1~~ wherein the means for mixing a liquid in a direction that is normal to a direction of flow of the liquid as the liquid passes between an inlet and an exit of a first in first out hydration tank further comprises:

horizontally extending vanes provided on an outside tank wall ~~the outside tank wall~~ and a central inlet tube ~~the central inlet tube~~ that interleaf in spaced apart relationship with vaness provided on a rotating vessel wall located between the central inlet tube and the outside tank wall. ~~the vaness provided on the rotating vessel wall.~~

4. (canceled)

5. (canceled)

6. (currently amended) A first in first out hydration tank  
~~comprising: A first in first out hydration tank according to Claim 5 further comprising:~~

a stationary outside tank wall, said tank wall provided with an exit provided at a bottom of the tank wall,

a stationary central inlet tube provided centrally within said outside tank wall with an inlet provided at a top of the inlet tube,

a vessel wall provided between said central inlet tube and said outside tank wall so that liquid flows from the inlet in a downward direction within said

inlet tube and then in an upward direction between said inlet tube and said vessel wall and then again in a downward direction between the vessel wall and the outside tank wall before exiting through the exit, and

said vessel wall rotating in a direction that is normal to the direction of liquid flow on either side of the vessel wall,

vanes secured to and extending approximately horizontally from said rotating vessel wall, and

stationary vanes secured to and extending approximately horizontally from said inlet tube and said outside tank wall so that the stationary vanes interleaf and are spaced apart from the vanes provided on said vessel wall.

7. (previously presented) A first in first out hydration tank according to Claim 6 further comprising:

a float movably provided adjacent said inlet tube, a lower end of the inlet tube provided with valve openings through which liquid flows out of the inlet tube, a float rod connecting said float to a valve sleeve, and

said valve sleeve movably located adjacent the valve openings as a means of dynamically controlling flow of liquid out of the inlet tube through the valve openings in response to variations in liquid level within the tank wall.

8. (previously presented) A first in first out hydration tank according to Claim 7 further comprising:

a bottom of the vessel wall provided with bottom openings for draining liquid from within the vessel wall, a cylinder provided on top of said tank wall, a cylinder shaft attached on one end to said cylinder and attached on an opposite end to a bottom drain valve seal to operably connect said cylinder and said bottom drain valve seal, and

said bottom drain valve seal reversibly sealing with said bottom openings as a means of alternately preventing and permitting liquid flow through said bottom openings.

9. (previously presented) A first in first out hydration tank according to Claim 6 further comprising:

a rotary motor provided exteriorly at a bottom of the outside tank wall, and a drive shaft attached to said rotary motor and to a bottom of the vessel wall as a means of rotating said vessel wall.

10. (previously presented) A first in first out hydration tank according to Claim 9 further comprising:

a bearing and a seal provided in the bottom of the outside tank wall, and said drive shaft extending through said bearing and said seal.

11. (previously presented) A first in first out hydration tank according to Claim 6 further comprising:

an air vent provided in the top of the outside tank wall, said air vent provided with a movable ball float that floats on a liquid level in the tank and closes the air vent when it moves upward and reopens the air vent when it moves downward.

12 - 14. (canceled)